PAM.
AFRICA

THE EXPLORATION OF THE TCHAD

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I.

THE actual occupation of the banks of the Tchad by a European power marks an important date in the penetration of central North Africa. With this occupation there ends, so far as this part of the interior is concerned, the period of exploring expeditions, of rapidly conducted discoveries demanding no less luck than sagacity, and of more or less fragmentary geographical sketches; and the era of continuous observation, methodically conducted on the spot by regular relays of investigators constantly stationed there, begins.

Incorporated in three empires, and now regularly included in the budget of a European power, the Tchad has finally entered the cycle of history. Its general character, its physical and economic conditions, and the human societies that live on its banks, will soon become the subject of scientific study and knowledge. Is this great lacustral tract of central Soudan destined to gather upon its shores a productive population, to attract to itself as a centre and bind together the future highways of communication converging from the different coast establishments toward the interior of North Africa? Or is the Tchad, in fact, as it is called by the English periodical, "West Africa," only a "great inspirer of illusions"?

The very name of the Tchad calls up one of the most important problems of African hydrography, and the problem which longest remained unsolved. With the streams that flow into it, of which the river Chari (or Shari) entering it from the south is the most important, the Tchad forms a hydrographic inland basin with no outlet to the sea. With its length of fourteen hundred kilometres, which makes its river Chari the equal of the river Senegal, with its area of nine hundred thousand square kilometres, which gives to its basin the sixth rank in the continent of Africa, this hydrographic system, separated from the Mediterranean by the whole extent of the Sahara, is shut into the interior of Africa, at the very centre of the Soudan, between the watersheds of the Niger-Binue, the Congo, and the Nile. The indentations of the Mediterranean coast and the Atlantic coast, the latter especially being hollowed inward so deeply by the Gulf of Guinea, bring this lacustral-fluvial system into comparative proximity to the coast of Tripoli and the mouths

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of the Niger. While, on the other hand, the first and up to this time the only European power established on its banks, namely France, is precisely the one whose coast establishments are farthest from the Tchad, it was from Algeria, the distant Mediterranean colony on the extreme north coast of Africa, from Senegal, a base of operations on the Atlantic ocean, at the extreme western point of the continent, and finally from the Congo, that France sent toward the Tchad converging expeditions, thus approaching the whole basin from the further side.

The essential outlines of this hydrographic system were not fixed until our own times, beginning in 1823. Now, eighty years later, only the principal depression of the basin has been settled and mapped out with exactness. The many branches of this chief depression have been barely touched upon, crossed here and there, or followed for a short distance. As for the intricate net work of affluent rivers, the regions where they rise, the outlines and exact limits of the fluvial basin as a whole, these still remain to be investigated and defined. Only recently, the official geographer of the Congo Free State, Mr. Wauters, editor of the "Mouvement géographique," of Brussels, carried away by his desire to bring a tribute of new territories to the river sea of tropical Africa, constructed a very interesting theory to support his claim to the river Wom, which has since been found (as the French explorers had foreseen) to belong to the basin of the Tchad.

The fact is that in this inland tract which is the central section of North Africa, the field of hypothetical geography, though it has been gradually restricted of late years, is still far from exhausted. Many a river, the upper section of which has been observed, remains to be identified with some watercourse now known by a different name but of which it is the origin. To what confluent, already known, does its altitude, its flow, its general character, seem to direct its course? On the one hand, we have fragments of rivers touched upon and studied by travelers, and their continuation indicated, in accordance with information gathered from the natives, along conjectural lines below the point where they were abandoned; on the other hand, we have the outlets of rivers which have been followed up for some leagues, but we do not know in what region they rise, or of what upper affluents and tributaries they are the outlets. A great many problems still remain to be solved. A methodical survey will be necessary.

Theoretic ideas concerning the limits of hydrographic basins, which have long been recognized to be deceptive, are once more, and more than ever, at fault in central Africa. The lines of separation of the watercourses are indistinct; the dividing lines of the watersheds are often

imperceptible. It is indeed a common fact in oro-hydrography that the line of division of the watersheds does not coincide either with the lines of maximum altitude or with any of the important mountain ranges of the country; the Patagonian Andes and the Himalayas furnish noteworthy examples of this. International conflicts have only lately arisen from boundary treaties based upon false theoretic ideas, upon conceptions of a purely abstract and far too simple oro-hydrography, such as have already figured in the treaties of Utrecht, where mention is made of the supposed watersheds of the Alps, or such as were boldly formulated in the famous memoir presented by Buache in 1752 to the Academy of Sciences of Paris, "An essay in physical geography, in which is proposed a general theory of the sort of *framework* of the earth, composed of mountain chains that traverse the sea as well as the land * * * ."

According to this theory, the immense hydrographic basins into which the African watersheds are divided, should be separated by real mountain barriers. But if ever mountain chains had a right to the name of "Mountains of the Moon," it is surely these! For the truth is, as against the theory of the framework of the earth, that the "parting of the waters" of the great African rivers, Congo, Nile, and Niger, which in this respect are like the mighty South American rivers, the Amazon, the Rio de la Plata, and the Orinoco, is accomplished far from the high altitudes, on plateaux and in marshy depressions. This topographical idea, as exact as it is contrary to the attractive theory of a world framework, was handed down from ancient geography and maintained by the Arabian and mediæval map-makers. It held its own, under various forms, up to the beginning of the nineteenth century. But it had been badly interpreted and needed to be brought up to date. This indispensable service has been done by the explorations of the past century.

II.

Antiquity has bequeathed to us the idea of a water current running from east to west in the interior of Libya or Ethiopia, between the tenth and twentieth parallels. In the map of the world of Ptolemy and of Alexandria, about the years 130 or 140 A. D., this line of water, called the river Niger, joins a great western lake, the Nigritus Palus, with a central lake, the lake of Libya (Libya lacus), in which it rises. There are, however, to the east of this latter sheet of water (whose longitudinal position very closely corresponds to the actual longitude of the Tchad), other lines of water, with lakes and marshes flowing in a general westerly direction, and continuing this transversal hollow of the interior of Ethiopia.

Later, as we shall see, other attempts at map-making will prolong this transversal line, in one direction to the western ocean (the Atlantic), in the other to the valley of the Nile. But before this mistaken extension was made did we not have here, at the very beginning of our era, an embryo of the fluvial-lacustral system of the Chari-Tchad,—confused, to be sure, with that of the Niger-Binue, as it will be later with that of the Senegal?

Oriental cartography with Edrisi (1160), mediæval cartography with Marino Sanuto or Sanudo (Venice, 1321), Ranulphus Hyggeden (1360), Picigani (Venice, 1367), the Catalan Map (1375), Andrea Bianco (Venice, 1436), Fra Mauro (Venice, convent of the Camaldules, 1457), maintain the traditional water-line from east to west, across Ethiopia; in Edrisi's map, this river of the Soudan is called the "Nile of the Blacks" to distinguish it from the Egyptian Nile; Sanudo calls it Niger, and Picigani, Nile. With Edrisi and Sanudo it empties into the ocean; with Picigani, Andrea Bianco, and Fra Mauro, it connects both with the ocean and with the Nile; and with all of them, but with the latter group especially, the fluvial system is not simple but complicated with marshy out-spreadings and with a great lake, which has, however, no fixed place, but is somewhere along its course.

The fifteenth century, the era of great sea voyages, throws no light on this traditional confusion, but rather darkens it. Discoveries by sea naturally direct people's whole attention to the coast. The interior of the African continent is represented in an incoherent and shapeless fashion on the globe of Martin Behaim (Nuremberg, 1492); there remains, however, the great central lake with its affluent rivers. With the map of the world by Diego Ribera, pilot major of the Indies, cosmographer to the Emperor Charles Fifth (Seville, 1529), attention to the coast lines and river mouths becomes not only predominant but exclusive. What he gives is less a map of Africa than a port-list of its coast. Representation of the interior is entirely given up, and the transversal water-line which previous ages had handed down now disappears completely.

Not until the map of the world by Ortelius (1587) do we again find this hydrographic depression, which is here clearly separated from the Nile. It starts from central Soudan, extends westward to the ocean at Cape Verde, and has along its banks, to the north, the towns or rather kingdoms of Borno, Guanguara, Cano, Tombotu.[1] It is to be noted that these place names, with the exception of Tombotu, which is the "Tenbuch" of Picigani and the Catalan Map, here make their first

(1) In this retrospective review of cartography, the spelling of the names taken from each document is strictly preserved.

appearance on any map. From this point on they will help us in identifying the watercourses and in distinguishing what tradition had confused. The map by O. Dapper, almost a century later (Amsterdam, 1676), is hardly more complete than that of the master-cartographer of Antwerp; it represents the river Niger as coming from the southeast (which is exactly the general direction of the Chari) and filling Lake Borno in the country of Guangara; then, flowing toward the west across Nigritie, watering on the north Casseno and Cano, and further on Tombotu, beyond a second great lake through which it passes; and from there, prolonged in the rivers of the shore maps of the western coast, it empties, through three or four arms, both north and south of Cape Verde.

For the interior, tradition maintains itself with remarkable uniformity, though there are some changes and additions of forms and names; toward the coast the confusion is even greater than formerly; all the exact ideas that have been gathered *de visu* are combined with the vague ideas of the unknown interior, into a single system which is inextricably confused.

Critical cartography, which hardly began till a hundred and fifty years ago, with D'Anville, will strive to bring order out of this chaos.

D'Anville, correctly informed by travelers from western Africa, finally cuts off all connection between the rivers of the west coast, Senegal and Gambie, and the inland watercourse of Nigritie. The latter becomes once more a mere fragment, without any outlet to the sea, uniting two distant lakes; or rather the traditional watercourse is divided into two fragments: one, the Niger, a river of Tombouctou; the other, quite distinct from it, the Nil des Nègres (Nile of the Blacks) rising in Lake Bournou, and running, contrary to the tradition of centuries, not westward but eastward; watering the countries of Bournou and Kanem, both situated to the southeast of the lake; and finally becoming, once more, a tributary of the Nile. The false junction is thus reëstablished between the Nile of Egypt and the central lake of Nigritia,—the latter set far from its usual place, or rather divided into two basins. So, if the distinction between the Senegal and the Niger is clearly established by D'Anville, if the individuality of the Niger itself is separated both from the Senegal and from the Nil des Nègres, there is on the other hand, complete confusion between the Nil des Nègres and the western branch of the upper Nile which is today called Bahr el Arab, Bahr el Ghazal.

Meanwhile many years have yet to pass before the inland region is once for all isolated, and separated from the Niger itself. In the map by Major Rennell, published in 1790 and annexed to the first volume of the "Proceedings" of the British African Association, which had just been founded in 1788, the Niger or Nil Abid, as in D'Anville's careful map,

runs eastward through Ghana (Kano) and disappears in the deep central depression of the marshes of Ouangara, which occupy the actual position of the Tchad. Only some distance to the northeast of this depression, and separated from it by a sand desert, do we find the countries of Kanem, Bornou, and Bagherim, through which run the Bahr el Gazal and the Bahr el Fittra, whose junction forms the Bahr Misselad (the *Gir* of Ptolemy); but the last is no longer a tributary of the Nile, as the river of the countries of Bournou and Kanem was in D'Anville. This last point is a distinct gain; though the junction of the Nile of the Blacks with the Nile of Egypt finds a last partisan in the traveler Hornemann (1800) who in the last letter received from him, still repeats that this junction exists, but only in the rainy season.

Thus appear, and it is another gain to be noted, several of our actual modern names: Kanem, Bornu, and Baghirmi,—all three of them countries of the Tchad,—now wrongly placed, to be sure, as far north as Tibesti; and also, beside these names of countries, the town of Kouka and its equivalent Kaouga, situated on a lake of the Bagherim; and the town of Ouara, and still others that are easily identified with real localities, just as in the region of the Tchad we find a Bahr el Ghazal and, in fact, in the eastern part, a Lake Fittri. Ideas are growing more exact, even in the confusion which still reigns, and the principal cause of this confusion is the illusory presence of the Niger in this central region. And the Bahr Koulla (Ptolemy's Coloè), which comes from the southeast to empty into the marshy depression of the Ouangara—as the Niger is still supposed to do from the northwest—and there to be lost by evaporation, offers a striking resemblance to the Chari, the real tributary of the Tchad. Up to this time, then, although the upper Niger already has its true place on the map, its lower course remains a problem; instead of bending it downward from Timbuktu-Kabra toward the Gulf of Guinea, thus making it describe a large curve toward the south, it is still directed straight toward the unknown interior of the continent.

Meanwhile the controversies grow keener. Scientific curiosity is aroused by the irritating enigma of this river whose outlet remains unknown. The zeal of explorers is stimulated by the discussions of geographers, who are unable to clear up the mystery; many travelers perish in the attempt, by rapids or by fevers. The impassible Isis remains veiled, Africa keeps its secret.

Two principal hypotheses divide men's minds: one, to which the illustrious name of Mungo Park is attached, gives to the Niger below Timbuktu a course concentric with the curve of the Guinea coast, and finally connects it beyond the equator with the Zaïre (Congo), whose

vast estuary had been known since the fifteenth century through the discoveries of the Portuguese,[1] but whose course was still unknown. The other hypothesis, that of Reichard (which proved to be true, and was verified upon the spot, but not until 1830, by Lander, the intelligent and faithful servant of Clapperton, who followed its course), turns it toward the Gulf of Guinea, where the numerous mouths of its vast delta, between Benin and Calabar, had not been observed by the Portuguese navigators, and had remained absent from the map until just before 1830.

This year, 1830, therefore, marks a date of prime importance both for the geographical history of the Niger which is at last individualized and complete, but which does not concern us here, and, indirectly, for that of the inland basin of North Africa, now finally separated from the fluvial course with which, according to a wrongly understood tradition, it had been persistently confused for so many centuries.

Thus the traditional line of water running across the interior of Africa now stands by itself; it has been separated first from the river Senegal, then from the Nile, and finally from the Niger; becoming circumscribed and defined this hydrographic region appears where, on the very site of the lake of Libya and the marshes of Ouangara, we shall see the Tchad.

III.

Direct exploration will now replace cartography by hearsay, will decipher the enigma, explain the vague traditions, and give precision to hitherto indefinite ideas.

Though there were some earlier native accounts of the kingdom of Bornu, it is from the journey of Ritchie and Lyon, from Tripoli to Murzouk (1820) that we must date the earliest information that reached Europe about Lake Tchad.[2]

But the general position of this sheet of water,—not to speak of its outlines in detail, which even today are still to be determined,—was not fixed until the expedition (1822-24) of Major Denham, Dr. Oudney, and Lieutenant Clapperton.[3] They started from Tripoli, and on February 17, 1823, they entered Kuka, the capital of Bornu, near the west shore of the Tchad, after having accomplished the first central crossing of the

(1) That is, the Rio do Padrão, or River of Padron, of Diogo Cão (1482), with whom (though this fact has been doubted) the Bavarian cosmographer, Martin Behaim, maker of the Nuremberg globe (1492) is said to have traveled.

(2) Lyon, *Travels in North Africa*, accompanied by geographical notices of the Soudan, 1821.

(3) *Travels and Discoveries in Northern and Central Africa*, 1826.

great desert ever made by Europeans. Denham, who followed the south shore of the lake, and crossed the rivers which flow into it, is also the first European who ever saw the Logon-Chari, the great southern affluent of the basin. The name "Lake Waterloo" which he gave to it did not survive; this warlike note sounded by a traveler in the centre of Africa has only a certain interest as retrospective psychology.

Scientific exploration, however, in this case as well as for the whole of the Soudan, does not precede the journey of Barth (1850-56), the "master of African research."

After having crossed the Sahara with Overweg and Richardson by way of the oases of Aïr, Barth also reached Kuka. While his companion Overweg visited the island population of the Buddumas, in the archipelago of the lake, he penetrated toward the southwest and discovered the Binue, the great eastern branch of the Niger. He passed through Musgou, Kanem, Baghirmi, and Sokoto, stopped at Timbuktu, returned to Kuka (1855), and, alone, his companions having succumbed some years earlier to the attacks of the climate, he returned to Europe by way of Tripoli, after having gathered a great mass of geographical, historical, ethnological, and linguistic materials covering an immense extent of territory, and having made great additions to the map of the central Soudan by astronomical observations which settled for the first time the cartography, until then vague and undetermined, of this mysterious country.

From this memorable six years' journey he brings us, in his "Reisen und Entdeckungen in Nord und Zentral Afrika,"[1] the results of a complete and admirable study, both of the country itself, and of the "State of Human Society in Northern Central Africa."

To the name of Barth, which marks the beginning of a new era in the history of African discoveries, we must add that of Vogel, who, following him, had in 1853-56 taken the desert route from Tripoli to Kuka. Vogel marked with his itineraries all the countries about the Tchad, which is now to become more and more the point of rendezvous of the great travelers of the Soudan. From Bornu he went to the Chari, to the Binue, to the great intermediary depression called the lake or marsh of Tuburi, which had been discovered by Barth, and which, according to that illustrious traveler's account, is an extensive marshy flat, changing to a lake at the end of the rainy season, and then uniting the Binue, through the Mayo-Kebbi, to the Chari, through the Logon-Sserbéwuël. He visited another lacustral sheet belonging to the eastern region of the

(1) Gotha, 1857, 5 vols.

Tchad, Lake Fittri, and penetrated into Waday, where he was killed at Wara, in the same year (1856) in which Barth returned to Europe.[1]

The disappearance of all his companions, either murdered or overcome by the climate, was certainly well calculated to strike people's imaginations and to throw an almost miraculous light about his own late and solitary return. But they, too, as well as he, made their names forever illustrious. The memory of Vogel, indeed, received an unexpected homage in an English official document, under important circumstances; the memoir submitted to the Berlin conference (1884) by Sir Edward Malet, the English ambassador, represented as a claim of his country to sovereignty over the banks of the Niger the death of Vogel, "who perished in the neighborhood of that river." "Neighborhood" is rather strong, the Niger being separated by a distance of at least seventeen hundred kilometres from the town in Waday where the German explorer perished.

Following the same glorious footsteps, Von Beurmann (1862) also crossed the desert to the Tchad. From Kuka, he pushed toward the southwest, into Baoutchi, as far as Takoba, from which point he turned toward Waday, as Vogel had done. Like Vogel, also, he was killed; Nachtigal found his grave at Mao, a town of Kanem, to the east of the Tchad.

But these individual misfortunes did not dull for a moment the eagerness of explorers; they rather stimulated it. Gerhard Kohlfs (1865-67) in his turn followed the usual desert route, the path of the caravans, penetrating directly from Tripoli toward the Tchad. From this port of the desert, Europe unwearyingly cast its plummet toward the interior of Africa. He reached Kuka, explored the southern part of Bornu, and came out by Lagos.[2]

Next we come to Nachtigal; all the great names of Soudanese exploration meet us in our investigation. Nachtigal (1869-74) arrived at Kuka by way of Murzouk and Tibesti, explored Kanem and Borku, Baghirmi and Waday, then cutting across Darfour and Kordofan, he came back by way of Egypt. His itineraries completely encircle the Tchad, except to the southeast; they follow Lake Fittri and the Bahr es Salamat, which flows into Lake Tro. In addition to his direct observations he gathered a large mass of new information.[3]

(1) Wagner, *Vogels Reisen und Entdeckungen, Briefe Vogels, in Zeitschrift für allgemeine Erdkunde*, 1856; *Erinnerungen an einen Verschollenen*, Leipzig, 1863.

(2) *Quer durch Afrika*, 1874-75, 2 vols.

(3) *Sahara und Sudan*, 1879-82, 3 vols.

Like Barth, "Nachtigal left everywhere an imperishable memory," Monteil says. He has given us more information than any one else on the Mohammedanized peoples of these regions, where Islam has built up political organisms by grouping together the elements of authority and of social organization.

Matteucci and Massari, entering Africa by way of Souakim, crossed the central Soudan in 1880-81 in the opposite direction from that taken by Nachtigal, by way of Kordofan, Darfour, Waday, Baghirmi, Kuka, Kano, Bida, and the sea.[1]

But, at the time at which we have now arrived, the partition of Africa among European powers comes in to modify the character of African exploration. It had been geographical, scientific, and even humanitarian, for fifty years; now it becomes essentially political.

IV.

Beside the older colonial powers, Portugal, France, and England, which had been established on the coast of Africa for centuries, there comes upon the scene a new power, Germany, whose great statesman, Bismarck, had so long ridiculed the "*furor colonialis*." Immediately the great realist attacks the fictions of African international law, he entirely overthrows the fiction of "nominal occupation," which allowed England to paint long stretches of coast with her colors, without, in fact, exercising over them the least real authority. With an ardor all the more enterprising that it succeeded a disdainful and haughty abstention, this neophyte of colonial politics in a few months established for Germany an empire over seas. He directed his operations upon four or five points of the African coast in succession, investigated the estuaries, the bays, and the inlets, pried his way into the settlements and trading stations of the western coast, and especially into Cameroon, at the extreme point of the Gulf of Guinea, the most favorable indentation of the coast apparently from which to start toward the basin of the Tchad. An exact inventory now becomes all the more imperative because an English syndicate, the Niger Company, soon to be chartered by the crown, has just acquired the French trading stations along this river (1884), and assured itself a commercial monopoly there; and because, also, the French and German stations alternate along the coast of Cameroon as far as the French colony of the Gaboon, the first nucleus of the French Congo. Africa no longer belongs to those who simply claim it, but to those who exploit it. By saying boldly to England "àpropos" of Lüderitzland (Southwest

(1) *Journal de Matteucci*, 1885.

Africa), "You are doing nothing with this coast, therefore I take it," Bismarck had stated this dilemma, either to enter upon genuine possession, or be dispossessed of vague traditional rights.

The most ardent competition starts up among the colonial powers. The African conference meets at Berlin and signs the act of February 26, 1885, with this object among others, "To prevent the misunderstandings which might arise in the future from the recent acquisitions of territory along the African coast." By virtue of one of its declarations the powers which take possession of a territory or assume a protectorate put themselves under obligation to maintain real authority there (Article 35).

Soon the Declaration of London (August 5, 1890) establishes the respective zones of influence of France and England in the African continent, and designates as a "diaphragm," or separating barrier, the famous line, to be drawn later, from Say on the Niger to Barruwa (or Barua), on Lake Tchad, a line of which so much will be heard in the sequel. In order to reconnoitre, *ex post facto* at least, the region through which this line passes, and especially the kingdom of Sokoto, which by virtue of the agreement was to remain in the zone of action of the English Niger Company with "all that rightfully belongs to it," Monteil (1890-92) started in from St. Louis (Senegal) toward the Soudan, accomplished the first eastward crossing of the curve of the Niger, and reached the Niger at Say; then across the Houssa countries, by way of Sokoto and Kano, he arrived at Kuka, in Bornu. He stayed there four months, from April 10 to August 15, 1892, and then, leaving the basin of the Tchad, he came back across the desert, by way of Murzouk and Tripoli.[1]

The famous "diaphragm" had framed off the French and English zones of action. It was now necessary to complete the "diaphragm," to correct, if possible, the defective sketch of it, which British "bluff" had made France accept, unprovided as France was at the time with any correct information, and, finally, to fill it out.

The Committee of French Africa, which was founded at the same time (1890) devoted its chief efforts to uniting on the banks of Lake Tchad the French possessions of the Soudan, Algeria, and French Congo. The heroic Paul Crampel, who had started from the Congo and the Ubangi (also called Mobangi and Dua) "to the conquest of the Tchad,"[2] intending to explore the region of the Chari, and return by the north,

(1) *De St. Louis à Tripoli par le lac Tchad*, 1895.

(2) Harry Alis, *A la conquete du Tchad*, 1891.

making treaties on the way, had failed in his undertaking. His expedition (1890-91) had been annihilated by the Musselmen who prowl about the southern confines of the Islamite countries, on the borders of the savage and fetish worshiping tribes, in the upper basin of the Chari. Dybowski (1891), sent by the Committee of French Africa to support Crampel, had not carried out his plan.[1] More lucky or more persevering, the Maistre mission (1892-93), starting likewise from the Congo, returned by the Binue and the Niger with treaties which bring the southern part of Bagirmi into the zone of French influence.[2] Mizon (1890-92), who entered the delta of the Niger in spite of the ill treatment offered him by the Royal Niger Company, had already followed up the Binue and joined this eastern branch of the Niger to French Congo. The action of the English Company was a flagrant violation of the Navigation Act concerning the Niger, which stipulates for freedom of commercial navigation on the river and its branches. It did not interfere, however, with the conclusion of the Franco-German agreement of 1894, which assured, in part at least, the results obtained by the journeys of Mizon and Maistre.

From this agreement between France and Germany, following upon that of 1890 between France and England, dates the partition of the basin of the Tchad among three European powers. The later conventions (1898, with an additional declaration in 1899), made between France and Great Britain, are, so far as concerns the basin of the Tchad, only the development and completion of the famous convention of 1890. The Say Barua diaphragm, a vague line, the detail of which was to be settled later, is replaced, in the agreement of 1898, by a broken line, artificially composed of parallels and meridians, running along the borders of the Sahara in uninhabited and waterless territory, and ingeniously arranged, it would seem, to make Lake Tchad inaccessible to the French from the upper Niger. If such was, as it appears to have been, the unexpressed purpose of the English negotiators, we must at once recognize that they succeeded perfectly in heaping up practically insurmountable difficulties, that they made new negotiations necessary, and finally that they remained faithful to the spirit which had animated the negotiator of 1890. In laying the Franco-English Convention before the House of Lords, Lord Salisbury had allowed himself certain facetious remarks, in which good taste and diplomatic reserve gave way, in the most unexpected fashion, to the irony of the agriculturist, to the "humour" of the "gentleman-farmer." "It might be thought," Lord Salisbury had said,

(1) *La route du Tchad, De Loango au Chari*, 1895.

(2) *À travers l'Afrique centrale, Du Congo au Niger*, 1895.

pointing to the map and measuring the degrees, "that France has affirmed its right to a vast extent of territory. But you must judge not only by the extent of the territory, but by its value. The territory in question is what a farmer would call *light soil, very light;* in fact, it is the Desert of Sahara, and, therefore, the value of what France acquires is proportionately diminished" (House of Lords, August, 1890).

According to the agreements now in force, England possesses the western basin of the Tchad, with its river Komadugu-Waube. This river, the only important affluent of the Tchad beside the Chari, comes from Kano, and empties into the lake from the west, between Barua and Kuka. This watercourse of upper Algeria, with the river Sokoto, which runs in the opposite direction and empties into the Niger, helps to form a hydrographic connection between the Tchad and the great fluvial basin of the west. The routes of communication between the middle Niger and the Tchad are naturally within reach of this water-line, on which or near which are situated the great centres of the Houssa countries, Gando, Sokoto, Wurno, Katsena, and Kano. The last is the central market of upper Nigeria, the greatest market in fact of central Africa (chiefly for ostrich features, skins, and ivory). By way of Zaria it is connected with the lower Niger.

In lower Nigeria is the line of the Binue, which is far more important. This river, the eastern branch of the lower Niger, is navigable to beyond Yola in Adamawa, that is, all the way across the English territory. Its sources are in German territory, except for one, which is perhaps the most important,—the one which Mizon followed up as far as Bifara,—and which is in French territory. It is the one which perhaps drains the marshes of Tuburi; on the other hand, these may possibly have an outlet into the Logon-Chari.

Whether this supposition, which was called in question by Macdonald,[1] after his exploration of the Mayo-Kebbi at the time of the high waters in 1890, is confirmed or not; whether the Tuburi supplies on the one side the Binue, and on the other flows into the Chari, or is discharged only into one of these watercourses and belongs entirely to the basin of the Niger or to that of the Tchad; or whether it is even an independent basin with no outlet, an immense swamp, a clearly isolated depression; in any case, it would contribute no less toward forming between the Niger and the Tchad a hydrographic connection, either continuous, temporary, or fragmentary; and from the point of view that dominates our investigation, it therefore has a special interest.

(1) *Exploration of the Benne and its Northern Tributary, the Kabby: Proceedings of the Royal Geographical Society,* 1892.

In that part of the basin of the Tchad which belongs to Nigeria, British supremacy has not yet made itself felt; the reception at Kuka in 1891 of MacIntosh, the agent of the Royal Niger Company, was not promising. But since then circumstances have changed; the Sultan of Bornu has been overthrown. The recent appointment of a British resident at Yola, on the upper Binue, as an envoy to the Emir of Adamawa, and the negotiations of Nigeria with Fadel-Allah, the son of Rabah, the conqueror of Bornu, are the only indications of the attention paid by English politics to this region.

Germany, which shares with France the marshes of Tuburi, has a foothold in the basin of the lower Chari, of which it possesses the left bank, as well as the southern shores of the Tchad. But, absorbed in organizing its coast establishment and exploiting the territories which are most accessible either by the coast of Cameroon or by the Congo and the French route from Sanga, it has so far taken no more interest than England in what might happen in its part of the basin of the Tchad. This basin is distant from the German base of operations; the exploration of the mountain group of Adamawa, which must be crossed on the way to the Tchad, has not been carried far enough as yet to learn what is the best route.

On a recent occasion, profiting by its neighborly relations with the colony of French Congo, Germany was on the point of undertaking in common with France some united action in the basin of the Tchad. Finally, the whole weight of the enterprise fell upon France alone. Once more, on this occasion, France proved herself the soldier of civilization.[1]

V.

By the convention of 1898, England discovered that the north, east, and south banks of Lake Tchad, so far as is included between the point of intersection of the fourteenth degree of latitude (the parallel passing through Barua) with the west bank of the lake, and the point where the Franco-German frontier meets the lake were falling within the French sphere of influence. The additional declaration of 1899 only completed this boundary by explicitly recognizing the kingdom of Waday as belonging to the French sphere. France, in abandoning to England or to the Egyptian Soudan the Bahr el Ghazal, in evacuating the posts which had been founded along the upper Nile and at Fashoda, at least fixed the eastern limits of its basin of the Tchad. In principle, the boundary line, which

(1) Though guilty, it is true, of a "violation of frontier," for which the English and Germans did not fail to reproach her, *Berliner Tagblatt*, November 26, 1901.

first follows the line of division between the watersheds toward the Nile or the Congo, will ultimately be fixed so as to separate the kingdom of Waday from what was the Egyptian province of Darfour.

It was by way of the Congo, following up the Ubangi and crossing the highlands to the north, that France established herself in the basin of the Chari-Tchad. This interior section of central Africa is reached by way of a small branch of the Ubangi, which flows into the great river at its northernmost elbow (fort of Possel). Beyond the indefinite summit line from which the Kemo flows toward the south, the waters are found to run to the north, that is, toward the Chari. In this centre of Africa, which for some thousand kilometres is drained by this inland river with its main bed and its many branches, we meet, in going toward the north, first the different sections of the Soudan, which form a zone of organized countries between the equatorial forest and the desert; then the countries which form a transition from the Soudan to the Sahara, between the country of the blacks (Nigritia) and the territories frequented by the nomads; and finally, for some thousand kilometres further toward Borku, Tibesti, and Aïr, the tracts of the Sahara itself. These last were likewise recognized as belonging to the French sphere by the Franco English Convention of 1899. All these regions, both of the Soudan and the Sahara, have, since 1900, constituted the "military territory of the countries and protectorates of the Tchad." They are contiguous on the west with the territory of Zinder, which belongs to western Africa (Senegal).

As a result of typographical circumstances which have twice been repeated in the course of African exploration and which have had very fortunate results for France, distant coast establishments and small rivers near the coast have opened the way to two great fluvial basins in the interior of the continent. Just as Senegal was her historic route by which to enter the western Soudan and reach the upper and middle Niger, whose mouths and lower course were held by England, so the estuary of Gaboon, and the little river Ogowe, persistently followed up, introduced France, by a side door as it were, to the navigable Congo, and from there the Ubangi pointed the way in one direction to the Nile and in another to the Tchad.

The Gentil mission was entrusted with this last objective point (1895). Gentil carried the steamboat, "Léon-Blot," across from one watershed to the other, and descending the river Chari reached the basin of the lake; on October 30, 1897, the French colors floated on the Tchad.

But at the moment when the newcomers thus penetrated to the heart of North Africa, a tempest had just broken loose there. A Soudanese conqueror, Rabah, at the head of well armed bands, was ranging over

these inland regions and laying them waste. Starting from the Egyptian Soudan, he had conquered Bornu, pillaged and burned the villages and reduced Kuka, "the marvelous ancient capital of Bornu, the city of a hundred thousand inhabitants," to an immense heap of ruins. He seemed to be sent by the Sheik Senoussi, the present Mahdi, chief of the most powerful and active Mohammedan orders, to unite the countries of the Tchad in fanatic hostility against the infidels. He proclaimed himself agent of the Mahdi of Omdurman, and his seal bore these words, "Rabah, Emir of Bornu, in the name of the Mahdi."

For a moment it was to be feared that the route to the Tchad, opened by way of the Chari, would be closed by Islam. Rabah, in fact, had invaded Bagirmi.

The "Rabism" of Bornu was overcome, like the Mahdism of Omdurman, after a series of battles; in one of them seven Europeans were killed and forty-four Senagalese meeting the attack of nearly twelve thousand men, of whom twenty-seven hundred were armed with muskets (Zogbar, 1899); in another battle forty-five per cent of the effective force of Europeans and Senagalese were killed or wounded (at Kouno, 1899). The final struggle against Rabah took place at Kussuri (April 22, 1900), on the lower Chari, the point of junction of the three French missions: that of the Chari under Gentil, that of central Africa under Captain Joalland, and that of the Sahara under Foureay and Major Lamy, which had started separately from the Congo, from Senegal, and from Algeria.[1]

To these three missions we owe our most recent information concerning the hydrographic basin of the centre of Africa.

The Chari, subject like all rivers of the inter-tropical region to the alternation of the rainy and dry seasons, is only about twenty metres wide at the point where it is reached by the carry, of more than three hundred kilometres, from the elbow of the Ubangi. But this point (Fort Crampel), at which canoe navigation begins, is not on the Chari itself, but on a branch, the Gribingi; at the junction, this stream, much narrower than the river into which it flows, is not more than sixty metres wide. The Chari, it is a very considerable river even in the season of low water, and has a very broad bed; at the season of high water, it not only becomes a majestic stream as much as six or eight kilometres wide in some places, but it also spreads in every direction over the neighboring plains, where it forms countless temporary pools, lakes, and ponds. Its extreme limits are high banks recognizable from a distance by their

(1) *La Géographie, Bulletin de la Société de géographie,* 1900, No. 12, and 1901, Nos. 5 and 6.

tall wooded growth, which toward the south becomes tropical in appearance. A line of military stations at long intervals dots its course to the Tchad. These stations are connected by the river route; but at low water the navigation of the river is difficult for steamboats.

The Tchad, into which the Chari flows through the numerous arms of its delta, now completely explored, also rises and falls alternately, but can be navigated at all seasons by keeping at a distance of from three to five kilometres from its bank. At this distance the depth, in low water, is more than three metres, and it increases greatly toward the open. At the eastern end sandbanks are numerous but to the west the water is deep. The line of the banks is bordered with reeds; at the east the shore is not approachable, but is broken and deeply indented by lagoons and marshes. The brilliant sheet of the Tchad is studded, in this part, with many islands, forming the archipelago of Budduma. The inhabitants are the robbers and pirates of the Tchad; they also raise cattle, which they take to feed on the shores and bring back to their islands at the least alarm.

The water of the lake, though subject to evaporation, which is intense during the dry season, is even then sweet and very good to drink. Countless herds of antelopes in long, unbroken lines come down to it to drink. Large game in abundance wanders on its shores, elephants are numerous, giraffes, rhinoceroses, and lions are common in the thicket. The banks are piled with the bones of hippopotamuses, crocodiles, and elephants, and with the remains of enormous fishes. The woods and thickets are the haunt of game of all kinds, from the guinea fowl to the rhinoceros.

The Chari also abounds in fish; on its shores and its sandbanks, great animals sport, loll, wade, and splash; some parts of the banks of the Chari are inhabited by elephants. Antelopes and small game literally swarm there.

The basin of the Tchad is prolonged toward the southwest in a sort of lagoon or gulf which is very extensive, the Bahr el Ghazal, and in which, according to the account of the natives, the water advances as much as sixty kilometres inland at the time of high water.

This lacustral sheet, situated at an altitude of two hundred and forty to two hundred and sixty-five metres, with indeterminate boundaries, spreading out very broadly at the time of high water, and shrinking at low water into the deepest hollow of the depression, has, from the limits of the winter season to the limits of the dry season, an area varying from more than fifty thousand to eleven thousand square kilometres, according to Rohlfs, and an average area of twenty-seven thousand square kilometres, according to Nachtigal. Overweg, who navigated upon the lake

for nearly two months, found no depth greater than six metres. Its northern bank is arid and deserted; the former permanent inhabitants have fled before the incessant forays of the nomads. Here, it is already the Sahara.

The fetish worshiping and cannibal tribes of the basin of the Congo are contiguous on the north with exclusively pagan tribes which inhabit the basin of the Chari up to the tenth degree of latitude. To the north of the tenth parallel the population is mostly Mohammedan. The delta of the Chari is inhabited by sheep raisers and farmers, Arab-Negro half-breeds, such as are also found along the southern shore of the Tchad to Bahr el Ghazal. To the south of this broad depression, an overflow reservoir, appear the white Arabs, in Khozzam. To the north of the fertile valley of the Bahr el Ghazal, the negroes of Kanem farm a country rich in grain, dates, and cattle; we may well hope to make of this a splendid country, now that it is occupied by France and will no longer be raided at regular intervals by the white Arabs of the north bank of the Tchad, nomad robbers, who raise cattle and live on the blacks of Kanem, and who, because they do not cultivate the ground, are at the mercy of Kanem which feeds them. And finally, beside the white Arabs, in the Sahara, from Zinder to Darfour, and from the Tchad to Fezzan by way of Tibesti, there are the Zebbous, mostly nomads, without chiefs or organization, great robbers and highwaymen.

Bagirmi, Kanem, and Waday are the three great organized sultanates in the French part of the basin of the Tchad. A protectorate has been established over Bagirmi since 1897, and over Kanem since 1899.

This region is rich in cattle and grain of all sorts; moreover its numerous population produces leather and fabrics, and consumes a great quantity of merchandise of European origin, such as cloth, sugar, coffee, tea, hardware, perfumery, soap, and so forth. The organization of the local commerce is entirely in the hands of the Tripolitans. Tripoli is the port of the whole central Soudan; its traders, using the desert routes, are the only furnishers of central Africa. But it is not conceivable that many years should pass before a railroad, starting from some colonial trading station on the coast of Africa, will come in to modify the present state of things, and perhaps to revolutionize the economic conditions of this inland basin. A mixed route, that is to say, one composed of sections of navigable rivers and of railroads uniting them, is being built in western French Soudan. An English railroad starting from Lagos is progressing toward Algeria, with Kano for its objective point. MM. Duponchel, G. Rolland, P. Leroy Beaulieu, and P. Bonnard have for some time advocated lines of railroad across the Sahara or across the

continent, uniting the Mediterranean with the countries of the Tchad. Since the epidemic rivalry of the great powers and the international competition in Africa has suddenly modified the former methods of Europe, and roused it from its inactivity and somnolency, the age of "do-nothing-ism" must,—under penalty of loss of prestige,—once for all cease in central Africa.

THE PRESENT AND FUTURE OF SPAIN

G. DE AZCARATE

MADRID

I.

IN a discussion of modern Spain two current sayings must be remembered, the one places Spain among the dying nations, the other asserts that the Latin is the race of yesterday, the Anglo-Saxon the race of today, and the Slav that of tomorrow.

Great Britain is extending her rule over an area of thirty-two million square kilometres; Russia has expanded into Europe and Asia, forming a solid block of twenty-two million kilometres. It would seem that Great Britain, utilizing every means toward the conservation of her energies, has set herself to conquer the world and that Russia dreams of possessing the remainder of the two regions in which ancient civilization flourished. The subject of this essay does not cover the expansion of the nation first mentioned nor the imperialism of either country, and there is little need to seek further the reason for the understanding which exists among Anglo-Saxons, between England and the United States.

The Latin countries of Europe, including their colonies and the colonies of America, alone occupy an area exceeding thirty-one million kilometres, and if the Anglo-Saxons rule over three hundred and fifty-three millions of people and the Slavs over one hundred and twenty-nine millions, the Latins count two hundred and nineteen millions, while of the three hundred and fifty-three millions of English and North Americans only one hundred and twenty-one millions belong to the white race. It appears, indeed, at first sight, that a race inhabiting so great a portion of the earth and figuring so large a number of individuals is not destined to die or even to descend from the secular position it occupies at present in the history of civilization; and it should be remembered that W. T. Stead, who is an enthusiastic interpreter and promoter of the Americanization of the world, says, "Although it may seem a paradox, it is a fact that few parts of the world have been less Americanized than South America."

The mission and influence of a race varies with the times, even when the inheritance bequeathed it by other peoples is not taken into account. This inheritance, although disappearing from the external life of the nation, is woven eternally into the fabric of later ages and later

Translated by Henri Biron.

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